#4

Attorney's Docket No.: **H00498/70168 TJO**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Olivier J.A. Schueller et al.
Serial No.:	10/003,033
Conf. No.	2182
Filed:	November 1, 2001
For:	OPTICAL MODULATOR/DETECTOR BASED ON RECONFIGURABLE DIFFRACTION GRATING
Art Unit:	2878

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, Washington, D.C. 20231, on the 12 day of June 2002.

Karen M. O'Keefe
Signature

Box Missing Parts
Commissioner for Patents
Washington, D.C. 20231-0001

SECOND PRELIMINARY AMENDMENT

Sir:

Prior to calculating the filing fee in the above-identified application, please amend the application as follows:

IN THE CLAIMS

Please cancel claims 97 and 98 without prejudice.

Please rewrite claims 4-7, 9, 15, 18, 22, 24, and 28 as follows.

4. (Amended) A method as in claim 1, wherein at least one of the first and second samples is two-dimensionally variant.

5. (Amended) A method as in claim 1, wherein the separate portions of the first sample are isolated from each other, and the separate portions of the second sample are isolated from each other.

6. (Amended) A method as in claim 1, wherein the separate portions of the first sample are exposed to electromagnetic radiation without exposing any portion of the first sample between

the separate portions to the electromagnetic radiation, and separate portions of the second sample are exposed to electromagnetic radiation without exposing portions of the second sample between the separate portions to the electromagnetic radiation.

7. (Amended) A method as in claim 1, involving determining absorption of the electromagnetic radiation by each of the first and second samples and determining a difference in absorption of the second sample compared with the first sample.

9. (Amended) A method as in claim 1, wherein the first and second samples are different fluids.

15. (Amended) A method as in claim 1, wherein each of the first and second samples comprises a series of elongate, essentially parallel sections.

18. (Amended) A method as in claim 1, wherein each of the first and second samples is two-dimensionally variant, and the diffraction pattern is two-dimensionally variant.

22. (Amended) A method as in claim 1, wherein each of the first and second samples is positioned in elongate voids in an article that is at least partially transparent to the electromagnetic radiation.

24. (Amended) A method as in claim 1, wherein each of the first and second samples is positioned in isolated, essentially parallel channels in a sample chamber.

28. (Amended) A method as in claim 1, wherein each of the first and second samples is positioned in isolated, essentially parallel channels in a sample chamber that is essentially transparent to the electromagnetic radiation.

REMARKS

Claims 4-7, 9, 15, 18, 22, 24, and 28 have been rewritten to remove multiple dependencies. Claims 97 and 98 have been cancelled without prejudice. No new matter has been added. Claims 1-69, 80-89 and 99-108 are pending.

Respectfully submitted,

Timothy J. Oyer, Reg. No. 36,628
Lisa E. Winsor, Reg. No. 44,405
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210
Tel. (617) 720-3500
Fax (617) 720-2441

Docket No. H00498/70168
Date: June 12, 2002

MARKED UP CLAIMS

4. (Amended) A method as in [any preceding] claim 1, wherein at least one of the first and second samples is two-dimensionally variant.

5. (Amended) A method as in [any preceding] claim 1, wherein the separate portions of the first sample are isolated from each other, and the separate portions of the second sample are isolated from each other.

6. (Amended) A method as in [any preceding] claim 1, wherein the separate portions of the first sample are exposed to electromagnetic radiation without exposing any portion of the first sample between the separate portions to the electromagnetic radiation, and separate portions of the second sample are exposed to electromagnetic radiation without exposing portions of the second sample between the separate portions to the electromagnetic radiation.

7. (Amended) A method as in [any preceding] claim 1, involving determining absorption of the electromagnetic radiation by each of the first and second samples and determining a difference in absorption of the second sample compared with the first sample.

9. (Amended) A method as in [any preceding] claim 1, wherein the first and second samples are different fluids.

15. (Amended) A method as in [any preceding] claim 1, wherein each of the first and second samples comprises a series of elongate, essentially parallel sections.

18. (Amended) A method as in [any preceding] claim 1, wherein each of the first and second samples is two-dimensionally variant, and the diffraction pattern is two-dimensionally variant.

22. (Amended) A method as in [any preceding] claim 1, wherein each of the first and second samples is positioned in elongate voids in an article that is at least partially transparent to the electromagnetic radiation.

24. (Amended) A method as in [any preceding] claim 1, wherein each of the first and second samples is positioned in isolated, essentially parallel channels in a sample chamber.

28. (Amended) A method as in [any preceding] claim 1, wherein each of the first and second samples is positioned in isolated, essentially parallel channels in a sample chamber that is essentially transparent to the electromagnetic radiation.